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मानक

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Mazdoor Kisan Shakti Sangathan

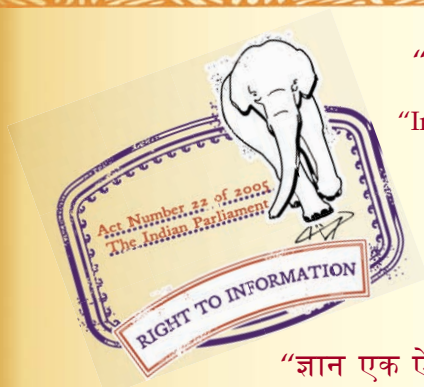
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“पुराने को छोड़ नये के तरफ”

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“Step Out From the Old to the New”

IS 6893-10 (1992): Proforma for purchase specification for machine tools, Part 10: Copying lathes [PGD 3: Machine Tools]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

मशीनी औजारों की क्रय — विशिष्टि का प्रपत्र

भाग 10 नकल खराद

Indian Standard

**PROFORMA FOR PURCHASE SPECIFICATION
FOR MACHINE TOOLS**

PART 10 COPYING LATHES

UDC 658'711'6 (083'22) : 621'941'244

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**BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002**

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Price Group 2

FOREWORD

This Indian Standard (Part 10) was adopted by the Bureau of Indian Standards, after the draft finalized by Machine Tools Basics and Modular Units Sectional Committee had been approved by Production Engineering Division Council.

The proforma for preparation of purchase specification for machine tools has been prepared to enable a prospective buyer to collect data from various manufacturers/suppliers for purposes of comparison. This is meant to be sent out with an enquiry by the purchaser so that the manufacturers/suppliers can fill in the data and send to the purchaser to make the comparison easier for the purchaser.

In the preparation of this standard, considerable assistance has been taken from the details supplied by the leading manufacturers and users of the product.

*Indian Standard***PROFORMA FOR PURCHASE SPECIFICATION
FOR MACHINE TOOLS****PART 10 COPYING LATHES****1 SCOPE**

This standard lays down the proforma for purchase specification for copying lathes. It also gives essential information about the copying lathes and their accessories which will enable the user to assess their usefulness and applicability.

*IS No.**Title*

2161 : 1962

Coolant pumps for machine tools

2582 : 1972

Dimensions for lathe spindle noses and face plates

4691 : 1985

Degrees of protection provided by enclosures for rotating electrical machinery (*first revision*)**2 REFERENCES**

2.1 The following Indian Standards are necessary adjuncts to this standard:

<i>IS No.</i>	<i>Title</i>		
5 : 1978	Colours for ready mixed paints and enamels (<i>third revision</i>)	10190 : 1982	Test chart for copying lathes with horizontal spindle — Lathes with swing over bed up to 500 mm and distance between centres up to 1 500 mm
1231 : 1974	Dimensions of three-phase foot-mounted induction motors (<i>third revision</i>)		
1715 : 1986	Dimensions for self-holding tapers (<i>second revision</i>)	12075 : 1987	Mechanical vibration of rotating electrical machines with shaft heights 56 mm and higher — Measurement, evaluation and limits of vibration severity
1983 : 1985	Shank sections for single point turning and planing tools (<i>first revision</i>)		

3 PROFORMA

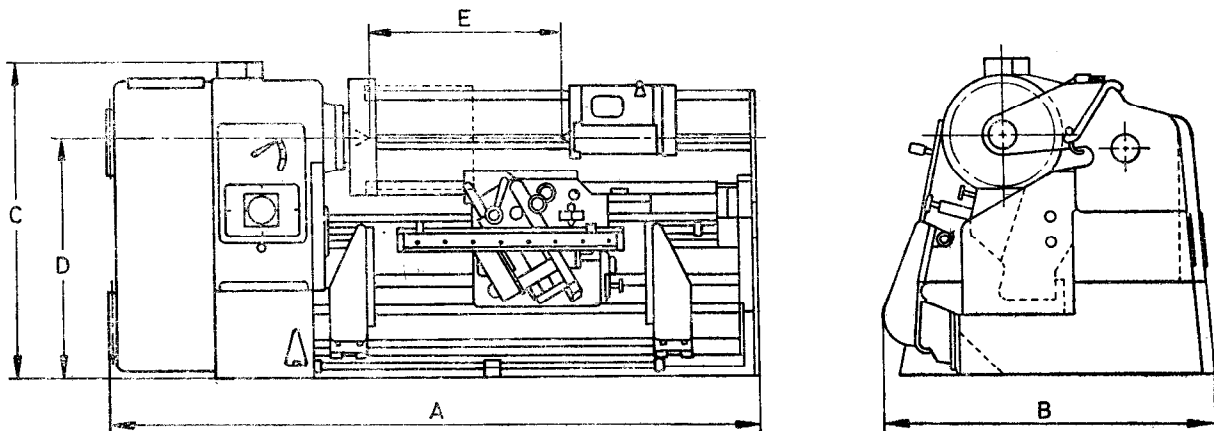
<i>Specification</i>	<i>Reference to Indian Standard</i>	<i>Unit</i>	<i>Actual Value</i>
(1)	(2)	(3)	(4)
3.1 Capacity			
3.1.1 Maximum swing		mm	
3.1.2 Maximum turning diameter		mm	
3.1.3 Maximum turning length		mm	
3.1.4 Bed width		mm	
3.1.5 Maximum weight of work piece that can be held in chuck and supported by live centre in tailstock		kg	
3.2 Main Spindle			
3.2.1 Type and size of spindle nose	IS 2582 : 1972		
3.2.2 Type and size of taper bore in spindle	IS 1715 : 1986		
3.2.3 Size of bore through spindle			

<i>Specification</i>	<i>Reference to Indian Standard</i>	<i>Unit</i>	<i>Actual Value</i>
(1)	(2)	(3)	(4)
3.3 Tailstock			
3.3.1 Type and size of internal taper in tailstock sleeve	IS 1715 : 1986		
3.3.2 Sleeve travel, Manual/Power operated (whichever is applicable)		mm	
3.3.3 Sleeve diameter		mm	
3.4 Copying Slide			
3.4.1 Number of slides			
3.4.2 Stroke		mm	
3.4.3 Feed : longitudinal			
a) No. of feeds			
b) Range		mm/min	
c) Rapid traverse rate		mm/min	
3.5 Infeed Slide			
3.5.1 Number of slides			
3.5.2 Stroke		mm	
3.5.3 Feed (infeed)			
a) Number of feeds			
b) Range		mm/min	
c) Rapid		M/min	
3.6 Main Spindle Speeds			
3.6.1 Number of speeds and range			
a) Forward		No./rpm	
b) Reverse		No./rpm	
3.7 Tools			
3.7.1 Maximum shank section of tool (to be specified for different slides)	IS 1983 : 1985	mm × mm	
3.8 Lubrication			
Type of lubrication (Details to be specified)			
3.9 Safety Provisions			
(Details to be specified)			
3.10 Electricals			
3.10.1 Total power		kW	
3.10.2 Power supply		V,ph,H _z	
3.10.3 Motor(s)			
3.10.3.1 Main			
a) Type			
b) Frame size and mounting	IS 1231 : 1974		
c) Output(s)		kW	
d) Speed(s)		rev/min	

Specification (1)	Reference to Indian Standard (2)	Unit (3)	Actual Value (4)
e) No. of phase			
f) Power factor			
g) Efficiency		percent	
h) Rated voltage		V	
j) Frequency		Hz	
k) Type of duty			
m) Class of insulation			
n) Ambient temperature		deg C	
p) Type of protection	IS 4691 : 1985		
q) Type of cooling	IS 6362 : 1971		
r) Vibration limits	IS 12075 : 1987		
s) Any other features			
3.10.3.2 Other Motor(s)			
a) Type			
b) Frame size and mounting	IS 1231 : 1974		
c) Output(s)		kW	
d) Speed(s)		rev/min	
e) No. of phase			
f) Power factor			
g) Efficiency		percent	
h) Rated voltage		V	
j) Frequency		Hz	
k) Type of duty			
m) Class of insulation			
n) Ambient temperature		deg C	
p) Type of protection	IS 4691 : 1985		
q) Type of cooling	IS 6362 : 1971		
r) Vibration limits	IS 12075 : 1987		
s) Any other features			
3.11 Coolant Pump	IS 2161 : 1962		
a) Output(s) of motor		kW	
b) Speed(s) of motor		rev/min	
c) Discharge of pump at maximum working height		l/min	
3.12 Geometrical and Practical Tests	IS 10190 : 1982		
3.13 Colour	IS 5 : 1978		
3.14 Weight of Machine with Electrical and Standard Accessories		kg	
3.15 Floor Space Required (Length $\times$ Width)		mm $\times$ mm	
3.16 Standard Accessories (Details of accessories — IS No. to be specified wherever applicable like Centres, Spanners, etc)			
3.17 Special Accessories (Details of accessories — IS No. to be specified wherever applicable like Chuck, Live centre, Coolant pump, etc)			
NOTE — While submitting quotations, the following information shall be furnished by manufacturers/suppliers, together with technical literature and capacity chart of the machine (see Annex A for representative capacity chart for copying lathes):			
a) Hardness of bed guideways, and			
b) Any other special features.			

ANNEX A
(Clause 3.17, Note)

REPRESENTATIVE CAPACITY CHART FOR COPYING LATHES



- A* — Overall length =
- B* — Overall width =
- C* — Overall height =
- D* — Height of spindle from ground level =
- E* — Max. distance between centres =

NOTE — Dimensions given shall consider all standard accessories.

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